

ABSTRACT

5 **Flexible factory joint for metallic tubes which enclose loosely inside
 them optical fibers and its method of construction**

10 Flexible joint which is used for the repair during the production of metallic
 tubes which enclose loosely inside them optical fibers, surrounded by a
 suitable filling material or for the connection of long lengths of the above
 mentioned tubes during the manufacturing of submarine cables which contain
 these tubes.

15 The joint comprises a connecting metallic tube (6), which connects externally
 with overlapping at its ends the metallic tubes (3, 10) after splicing is
 performed between the optical fibers which they enclose and which are
 separated in bundles (1, 2).

20 The mechanical connection of the joint is achieved through plastic
 deformation of the over-applied connecting metallic tube by creating grooved
 rings (11) at the sections where it overlaps the metallic tubes to be connected
 (3,10). The water tightness of the joint is obtained by welding the ends (8) of
 the over-applied connecting metallic tube (6) to the external surface of the
 metallic tubes to be connected (3, 10). In the case the metallic tubes carry a
 plastic coating (4), this is restored in the area of the joint (9, 5).